UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,828	07/14/2003	Ajay Kumar	5681-15100	5939

58467 7590 11/30/2007 MHKKG/SUN P.O. BOX 398 AUSTIN, TX 78767	**EXAMINER** TRUONG, CAMQUY

ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
11/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/618,828	KUMAR ET AL.
	Examiner	Art Unit	
	Camquy Truong	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 September 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date <u>9/28/07</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-36 are presented for examination.

2.   It is noted that although the present application does contain line numbers in the

specification and claims, the line numbers in the claims do not correspond to the

preferred format. The preferred format is to number each line of every claim, with each

claim beginning with line 1. For ease of reference by both the examiner and Applicant

all future correspondence should include the recommended line numbering.

Claim Objections

3.   Claim 35 is objected because of there are two claims "35". It should be "34".

Please make a correction.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5.   Claims 1-36 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-56 of copending Application No. 10/618,810.

Although the conflicting claims are not identical, they are not patentably distinct from each other. The examiner can ascertain not difference between the claims of the present application and that of copending Application No. 10/342, 432. It is noted that the minor difference encompass replacement of the recitation of the limitations in the claims and it appears to be substantially the same or duplicate or in some instance obvious over one another. For example, claims 1, 14, 15, and 26, functions performed by the steps are the same and obvious as the steps of claims 1, 10, 11, 20, 21, 30, 39, and 48 of copending Application No. 10/618,810.

This is a _provisional_ double patenting rejection since the conflicting claims have not yet been patented.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-8, and 10-14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hagersten et al. (U.S. Patent 5,983,326) in view of Klein et al. (U.S.

Patent 6,728958 B1).

8.   As to claim 1, Hagersten teaches the invention substantially as claimed including:

a system, comprising:

        one or more processors (each SMP node 12 includes multiple processors, col.

4, lines 51-56; col. 7, lines 14-16);

        memory coupled to the one or more processors and configured to store program

instructions executable by the one or more processors to implement a transaction

manager (memory 22 is configured to store data and instruction code for use by

processors 16, col. 8, lines 20-23; col. 9, lines 10-11), wherein the transaction manager

is configured to:

        manage a plurality of transactions (the home agent is configured to service

multiple requests simultaneously, col. 4, lines 60-64), wherein each transaction

comprises a plurality of operations (read and write operations, col. 8, lines 26-27) to one

or more data sources that are required to be committed to the one or more data sources

a atomically for each respective transaction (col. 8, lines 20-34);

        pause the plurality of transactions managed by the transaction manager in

response to a pause request to pause the transaction manager (the transaction

blocking unit is configured to block selected transactions if another transaction request

of a common coherency unit is currently being serviced by the home agent control unit,

col. 5, lines 55-64; col. 7, lines 44-53; col. 17, lines 7-9), wherein while paused, the

transaction manager does not allow any of the plurality of transactions managed by the

transaction manager to complete (a transaction blocking unit is coupled to a home

agent control unit for preventing the servicing of a pending coherent transaction request

if another transaction request corresponding to the same coherency unit is already

being serviced by the home agent control unit, col. 4, line 64 – col. 5, line 1; col. 17,

lines 9-12); and

        resume the plurality of transactions managed by the transaction manager in

response to a resume request (subsequent requests involving the coherency unit are

not performed until the coherency activity corresponding to the coherency request is

completed, col. 17, lines 9-12).

9.   Hagersten does not explicitly teach a plurality of transactions initiated by one or

more applications. However, Klein teaches a plurality of transactions initiated by one or

more applications (col. 1, lines 38-41).

10.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of plurality of transactions initiated by

one or more applications as taught by Klein because this allows enhancing transaction

processing systems having volatile resource managers that rely on other recoverable

resource managers for their work.

11.   As to claim 14, it is rejected for the same reason as claim 1 above. In addition

Hagersten teaches a system, comprising

One or more processor (each SMP node 12 includes multiple processors, col. 4,

lines 51-56; col. 7, lines 14-16); and

Memory coupled to the one or more processors and configured to store program

instructions executable by the one or more processors to implement one or more

application servers (memory 22 is configured to store data and instruction code for use

by processors 16, col. 8, lines 20-23; col. 9, lines 10-11), wherein each one or more

application servers is configured to:

Run one or more application each configured to initiate one or more transactions

(col. 1, lines 14-21), wherein each of the one or more transactions comprises a plurality

of operations to one or more data sources (read and write operations, col. 8, lines 26-

27) that are required to be committed to the one or more data sources atomically for the

transaction (col. 8, lines 20-34); and

Provide one or more transaction managers configured to manage the one or

more transaction initiated by the one or more applications (the home agent is configured

to service multiple requests simultaneously, col. 4, lines 60-64), wherein one or the

transaction managers is configured to pause a corresponding one or more transactions

in response to a pause request (the transaction blocking unit is configured to block

selected transactions if another transaction request of a common coherency unit is

currently being serviced by the home agent control unit, col. 5, lines 55-64; col. 7, lines

44-53; col. 17, lines 7-9) and to resume the corresponding one or more transactions in

response to a resume request (subsequent requests involving the coherency unit are

not performed until the coherency activity corresponding to the coherency request is

completed, col. 17, lines 9-12), wherein while paused, the transaction manager does not

allow the corresponding one or more transactions to complete (a transaction blocking

unit is coupled to a home agent control unit for preventing the servicing of a pending

coherent transaction request if another transaction request corresponding to the same

coherency unit is already being serviced by the home agent control unit, col. 4, line 64 –

col. 5, line 1; col. 17, lines 9-12).

12.   As to claim 2, Hagersten teaches the transaction manager is configured to

change the state of each of the plurality of transaction managed by the transaction

manager (col. 12, lines 4-7; col. 18, lines 29-31).

13.   As to claims 3-4, Hagersten teaches the transaction manager is configured to

request permission to change the state of each of the plurality of transactions managed

by the transaction manager prior to changing the state of each respective transaction

(col. 2, lines 57-67).

14.   As to claim 5, Hagersten teaches the transaction manager is configured to

prohibit a change of state of each of the plurality of transactions managed by the

transaction manager while the transaction manager is paused complete (a transaction

blocking unit is coupled to a home agent control unit for preventing the servicing of a

pending coherent transaction request if another transaction request corresponding to the same coherency unit is already being serviced by the home agent control unit, col. 4, line 64 – col. 5, line 1; col. 17, lines 9-12).

15.   As to claims 6-7, Hagersten teaches the transaction manager is configured to support the execution of each of the plurality of transactions managed by the transaction manager within a respective current state while the transaction manager is paused (col. 5, line 64 – col. 6, line 4).

16.   As to claim 8, Hagersten teaches while the transaction manager is paused, the system is configured to perform operations on one or more individual transactions (col. 5, line 64 – col. 6, line 4).

17.   As to claims 10, 12-13, Hagersten teaches one or more of the transactions are local and global transactions (col. 10, lines 3-11).

18.   As to claim 11, Hagersten teaches while paused, the transaction manager is not allowed to change the state of the one or more transactions to the committing state (a transaction blocking unit is coupled to a home agent control unit for preventing the servicing of a pending coherent transaction request if another transaction request corresponding to the same coherency unit is already being serviced by the home agent control unit, col. 4, line 64 – col. 5, line 1; col. 17, lines 9-12).

19.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Hagersten et al. (U.S. Patent 5,983,326) in view of Klein et al. (U.S. Patent 6,728958

B1), as applied to claim 1 above, and in view of Fowler et al. (U.S. Patent 4,502, 116).

20.   As to claim 9, Hagersten teaches the operations comprise one or more from the

following: rollback, abort, partial rollback, add/remove participant, and commit. However,

Fowler teaches one or more from the following: rollback, abort, partial rollback,

add/remove participant, and commit (paragraph 37).

21.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of one or more from the following:

rollback, abort, partial rollback, add/remove participant, and commit as taught by Flowler

to the invention of Hagersten and Klein because this allow the system to pause and

resume execution of the application program in an efficient and graceful manner.

22.   Claims 15-19, 25-30, and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hagersten et al. (U.S. Patent 5,983,326) in view of Fowler (U.S.

Patent 4,502, 116).

23.   As to claims 15, and 26, Hagersten teaches the invention substantially as

claimed including: a method, comprising:

pausing a transaction manager (the transaction blocking unit is configured to block selected transactions if another transaction request of a common coherency unit is currently being serviced by the home agent control unit, col. 5, lines 55-64; col. 7, lines 44-53; col. 17, lines 7-9);

pausing the transaction manager in response to said request, wherein while the transaction manager is paused, transactions managed by the manager are prohibited from completing manager (the transaction blocking unit is configured to block selected transactions if another transaction request of a common coherency unit is currently being serviced by the home agent control unit, col. 5, lines 55-64; col. 7, lines 44-53; col. 17, lines 7-9);

resuming the transaction manager (col. 4, line 64 – col. 5, line 1; col. 17, lines 9-12); and

resuming the transaction manager in response to said request, wherein when the manager is resumed, transactions managed by the manager are allowed to complete (subsequent requests involving the coherency unit are not performed until the coherency activity corresponding to the coherency request is completed, col. 17, lines 9-12).

24.   Hagersten does not explicitly teach that generating a pausing request and a resuming request. However, Fowler teaches generating a pausing request and a resuming request (col. 5, lines 40-53; col. 8, lines 52-56).

25.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of generating a pausing request and a

resuming request as taught by Fowler because this allows the system to pause and

resume execution of the application program in an efficient.

26.   As to claims 16-17, 27-28 and 36, Fowler teaches pausing comprises prohibiting

the transaction manager from changing the state of the one or more transactions (col.

10, lines 63-67), wherein the transaction manager attempts to perform a state change

on a transaction in response to input to the transaction manager (col. 5, lines 1-10).

27.   As to claims 18, 29, Fowler teaches state change comprises a change from a

nonexistent state to an active state (col. 10, lines 63-67).

28.   As to claim 25, Hagersten teaches while the transaction manager is paused,

continuing to support he execution of the one or more applications, except for the

changing of transaction states (col. 5, line 64 – col. 6, line 4).

29.   As to claims 19, and 30, Hagersten teaches input comprises notification that an

application has executed a commit transaction command (col. 16, lines 24-26; col. 17,

lines 7-12)

30.   Claims 20-24, 31-35 are rejected under 35 U.S.C. 103(a) as being as being

unpatentable over Hagersten et al. (U.S. Patent 5,983,326) in view of Fowler (U.S.

Patent 4,502, 116), as applied to claims 15, and 26 above, and further in view of Klein

et al. (U.S. Patent 6,728,958 B1).

31.   As to claims 20-21, and 31-32, Klein teaches notification that all participants are

prepared commit the transaction (col. 2, lines 32-36, and lines 53-67).

32.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of notification that all participants are

prepared commit the transaction as taught Klein because this allow transactions to be

performed simultaneously as desired for optimal system performance.

33.   As to claims 22-23, and 33-34, Klein teaches a change from a preparing state to

a committing state (col. 2, lines 14-23).

34.   As to claims 24, 35 Fowler teaches state change comprises a change from a

nonexistent state to an active state (col. 10, lines 63-67).

Response to the argument

35.   Applicant's arguments filed 9/27/07 for claims 1-36 have been considered but are

moot in view of the new ground(s) rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

36.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camquy Truong whose telephone number is (571) 272-3773. The examiner can normally be reached on 8:00Am – 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3756.
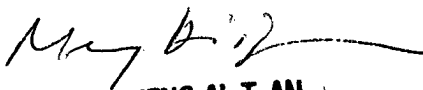
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR of Public PAIP. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

have questions on access to the Private PAIP system, contact the Electronic Business

Center (EBC) at 866-217-9197(toll-free).

Camquy Truong

October 14, 2007

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